

adjustment is controlled to position said carrier means within a predetermined allowable range including said desired position.

23. (New) The carrier mechanism according to claim 22, wherein said minute adjustment is controlled to change the driving of said carrier section when a difference between the desired position and an actually reached position is not within said allowable range.

24. (New) The carrier mechanism according to claim 23, wherein said minute adjustment is controlled to further change the driving of said carrier section when a difference between the desired position and an actually reached position does not enter within said allowable range even if predetermined times of minute adjustment are carried out under the change of the driving of the carrier section.

25. (New) The carrier mechanism according to claim 18, wherein said control device completes said minute adjustment of said carrier section by said driving motor when a distance moved by said minute adjustment is more than the remaining distance between the current position and the desired position.

REMARKS

The Office Action dated September 25, 2002 has been received and carefully noted. The amendments to the claims, drawings, specification and the following remarks are submitted as a full and complete response. Claims 1, 2, and 7 are amended. Claim 6 is cancelled. Claims 11-25 are added. Figures 1, 3, and 15 and the specification are amended. No new matter is added. Applicants thank the Examiner for the allowance of claims 2 and 3. In view of the above amendments and the following remarks, favorable consideration of claims 1 and 4-25 is respectfully requested.

The drawings are objected to for containing improper reference signs. Figures 1, 3, and 15 are amended, thereby, correctly referencing the elements of the present invention. Accordingly, Applicants request the withdrawal of the objection to the drawings.

The specification is objected for containing informalities. The specification is

amended to more clearly and distinctly recite the present invention. No new matter has been added. Accordingly, Applicants request the withdrawal of the objection to the specification.

The Office Action rejected claims 1 and 4-9 under 35 U.S.C. §102(e) as being anticipated by Takigawa et al. (U.S. Patent No. 6, 091,695). The Office Action takes the position that Takahashi teaches all the features recited in claims 1 and 4-9. Applicants respectfully disagree.

Claim 1 is directed to a carrier mechanism having accommodating means and carrier means for carrying out positioning between the accommodating means and the carrier means to thereby insert an object carried from the carrier means into the accommodating means or take the object accommodated in the accommodating means out of the accommodating means to the carrier means. The carrier mechanism comprises a driving means for moving the carrier means and a control means. The control means is operable when the carrier means is moved to a desired position in one direction for controlling the driving means so as to move the carrier means to a position in excess of the desired position and then to move the carrier means to the desired position. The control means controls the driving means so as to move the carrier means to the desired position without exceeding the desired position when the carrier means is moved to the desired position in a direction opposite to the one direction. The control means also controls the driving means such that the carrier means is driven at an accelerated rate at an initial activation, then braked after the acceleration, and finally subjected to a minute adjustment after the braking.

Takigawa is directed to a recording or reproducing device that includes a DC motor for driving cam plates in the horizontal direction, a sensor for detecting positions of the cam plates and a horizontal cam groove portion which is formed on at least one portion of the cam grooves and with which the cam pins of the pickup unit are brought into contact. However, Takigawa does not teach or suggest a control means that controls the driving means such that the carrier means is driven at an accelerated rate at an initial activation, then braked after the acceleration, and finally subjected to a minute adjustment after the braking. The Office Action takes the position that the movement of the cam plates at a second speed which is lower than the first speed is the same as the minute adjustments as

recited in claim 1. Applicants respectfully disagree.

It should be noted that the movement of the cam plates at a second speed is not the same as the minute adjustments of the present invention. Specifically, Takigawa discloses that motor drives the cam plate at a first speed then at a second lower speed until the target value is equal to a second predetermined value which is smaller than a first predetermined value. The driving of the cam plate is stopped when a third predetermined value is smaller than the second predetermined value. In contrast, the present invention allows for minutes adjustments of the cam plates even after the braking. In other words, the carrier means can be driven at an accelerated rate at the initial activation, braked, and then minute adjustments can be made after braking. Takigawa, however, only discloses a first and second speed for adjusting the movement of the cam plates. Therefore, it is submitted that Takigawa does not teach or suggest the features of a control means controlling the driving means such that the carrier means is driven at an accelerated rate at an initial activation, then braked after the acceleration, and finally subjected to a minute adjustment after the braking. Accordingly, Applicants respectfully submit that Takigawa neither teaches nor suggests all the features of the claimed invention. Thus, Applicants request the withdrawal of the rejection of claims 1 and 4-9.

Claims 4-9 are dependent upon claim 1. Therefore, it is respectfully submitted that since claims 4-9 are dependent upon claim 1, which recites patentable subject matter, claims 4-10 likewise recite patentable subject matter. Accordingly, Applicants respectfully request the withdrawal of the rejection of claims 4-9.

Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Takigawa et al. in further view of Takahashi. The Office Action takes the position that the combination of Takigawa and Takahashi teach or suggest all the elements recited in claim 10. Applicants respectfully disagree.

Claim 10, which is dependent upon claim 1, recites an accommodating rack that is always stationary for the carrier section in a reproducing apparatus. Takahashi is directed to a disc player system with disc selecting and loading means. However, Takahashi does not cure the deficiencies of Takigawa. Specifically, Takigawa does not teach or suggest a control means for controlling the driving means such that the carrier means is driven an (accelerated rate at an initial activation, then braked after the acceleration, and finally

subjected to a minute adjustment after the braking.) Therefore, it is submitted that the combination of Takigawa and Takahashi neither teaches nor suggests all the elements recited in claim 10. Accordingly, Applicants request the withdrawal of the rejection of claim 10.

Claims 11-25 are added. New claims 11-14 relate to the minute adjustments of the cam plates. Claims 11-14 dependent upon claim 1. Therefore, for at least the reasons mentioned above, these claims are also recite subject matter that is neither taught nor suggested by Takigawa. Accordingly, Applicants request favorable consideration of claims 11-14.

Claim 15, upon which claims 16-25 are dependent, recites the claimed invention even more distinctly and particularly. Thus, Applicants submit that these claims recite subject matter that is neither taught nor suggested by the applied art. As a result, Applicants request the favorable consideration of claims 15-25.

In view of the amendments and distinctions discussed above, withdrawal of the rejections to claims 1 and 4-10 is respectfully requested. It is respectfully submitted that claims 1, 4-25 recite subject matter that is neither taught nor suggested by the applied references. New claims 11-25 are added. Figures 1, 3, and 15 are amended. The specification is also amended to more clearly disclose the present invention. No new matter is presented. Therefore, Applicants submit that the application is now in condition for allowance with claims 1 - 25 contained therein.

Should the Examiner believe the application is not in condition for allowance, the Examiner is invited to contact Applicants' undersigned attorney at the telephone number listed below.

In the event this paper is not considered to be timely filed, Applicants respectfully petition for an appropriate extension of time. The Commissioner is authorized to charge payment for any additional fees which may be required with respect to this paper to Counsel's Deposit Account 01-2300 referencing Docket No. 107156-09070.

Respectfully submitted,

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Enclosure: Marked-up Copy of the Specification and Claims
Petition for Extension of Time
Request for Drawing Corrections

MARKED-UP COPY OF THE SPECIFICATION AND CLAIMS

IN THE SPECIFICATION:

Please replace the paragraphs as indicated.

Page 4, line 13.

To attain the object, the invention provides a carrier mechanism having accommodating means and carrier means, for carrying out positioning between the accommodating means and the carrier means, to thereby insert an object carried [by] --from-- the carrier means in to the accommodating means, or take the object accommodated in the accommodating means, out of the accommodating means to the carrier means, the carrier mechanism comprising driving means for moving the carrier means, and control means operable when the carrier means is moved to a desired position in one direction, for controlling the driving means so as to move the carrier means to a position in excess of the desired position and then to move the carrier means to the desired position, the control means controlling the driving means so as to move the carrier means to the desired position without exceeding the desired position when the carrier means is moved to the desired position in a direction opposite to the one direction.

Page 6, line 10.

To attain the object, the invention also provides a carrier mechanism having accommodating means and carrier means, for carrying out positioning between the accommodating means and the carrier means, to thereby insert an object carried [by] --from-- the carrier means in to the accommodating means, or take the object accommodated in the accommodating means, out of the accommodating means to the carrier means, the carrier mechanism comprising biasing means for biasing the carrier means in a predetermined direction, driving means for moving the carrier means, and control means operable when the carrier means is moved to a desired position in a biasing direction of the biasing means, for controlling the driving means so as to move the carrier means to a position in excess of the desired position and then to move the carrier means to the desired position while opposing a biasing force of the biasing means.

Page 12, lines 6-13.

Further, the rear wall 14 has formed therein an elongate cam hole C5 which intersects the cam hole C3 formed in the cam member 15 and extends in the direction of the Z-axis, and an elongate [cam] --guide-- hole C6 which intersects the cam hole C4 and extends in the direction of the Z-axis.

An angle at which the cam hole C1 intersects the guide hole C2 is equal to an angle at which the cam hole C3 intersects the guide hole C5, as well as an angle at which the cam hole C4 intersects the guide hole C6. Further, the cam hole C1 is slanted in the direction opposite to the cam holes [C4 and C5] --C3 and C4--.

Page 14, lines 13-21.

Referring to Fig. 3, the accommodating rack 10 has a plurality of accommodating slots "24" --10A-L-- formed therein in layers, which each accommodate a single tray 25 in a removable manner. Each tray 25 has formed therein a circular depression 25a in which the recording medium such as a CD and a DVD is mounted, and a notch 25b. Then, the plurality of trays 25 are accommodated in the accommodating slots [24] --10A-L--, and the accommodating rack 10 is inserted into the insertion opening 11 such that an open side thereof faces the carrier section 23.

Page 15, lines 10-14.

Further, when the engaging lever 26 engages with the notch 25b of the tray 25 at the clamped position and moves the tray 25 toward the side of the accommodating slot [24] --10A-L-- at the desired position, the tray 25 is inserted into the accommodating slot [24] --10A-L-- at the desired position.

IN THE CLAIMS:

1. (Amended) A carrier mechanism having accommodating means and carrier means, for carrying out positioning between said accommodating means and said carrier means, to thereby insert an object carried [by] from said carrier means into said accommodating means or take said object accommodated in said accommodating means, out of said accommodating means to said carrier means, said carrier mechanism comprising:

driving means for moving said carrier means; and

control means operable when said carrier means is moved to a desired position in one direction, for controlling said driving means so as to move said carrier means to a position in excess of said desired position and then to move said carrier means to said desired position, said control means controlling said driving means so as to move said carrier means to said desired position without exceeding said desired position when said carrier means is moved to said desired position in a direction opposite to said one direction,

wherein said control means controls said driving means such that said carrier means is driven at an accelerated rate at an initial activation, then braked after the acceleration, and finally subjected to a minute adjustment after the braking.

2. (Amended) A carrier mechanism having accommodating means and carrier means, for carrying out positioning between said accommodating means and said carrier means, to thereby insert an object carried [by] from said carrier means into said accommodating means or take said object accommodated in said accommodating means, out of said accommodating means to said carrier means, said carrier mechanism comprising:

biasing means for biasing said carrier means in a predetermined direction;

driving means for moving said carrier means; and

control means operable when said carrier means is moved to a desired position in a biasing direction of said biasing means, for controlling said driving means so as to move said carrier means to a position in excess of said desired position and then to move said carrier means to said desired position while opposing a biasing force of said biasing means.

7. (Amended) The carrier mechanism according to claim [6] 1, wherein said control means adjusts a quantity of said minute adjustment of said carrier means by said driving means, based on a distance over which said carrier means has been moved after execution of said minute adjustment and a remaining distance between a position currently assumed by said carrier means and said desired position.